

# **COMPUTATIONAL INTELLIGENCE**

## **AUTHOR SUBMISSION GUIDE: SETTING UP YOUR L<sup>A</sup>T<sub>E</sub>X 2<sub>ε</sub> FILES**

Authors may choose to submit their papers to *Computational Intelligence* in L<sup>A</sup>T<sub>E</sub>X 2<sub>ε</sub>. A PDF must also be provided, as the *Computational Intelligence* editorial office. The layout design for *Computational Intelligence* has been implemented as a L<sup>A</sup>T<sub>E</sub>X 2<sub>ε</sub> class file. The `coin` class file is based on the `mn` style file, which in turn is based on `article` style as discussed in Lamport's L<sup>A</sup>T<sub>E</sub>X manual (L<sup>A</sup>T<sub>E</sub>X: *A Document Preparation System*, Addison Wesley, Reading, Mass., 1994. ISBN 0201529831.)

Commands that differ from the standard L<sup>A</sup>T<sub>E</sub>X interface, or that are provided in addition to the standard interface, are explained in this guide. This guide is not a substitute for the L<sup>A</sup>T<sub>E</sub>X manual itself. Authors planning to submit their papers in L<sup>A</sup>T<sub>E</sub>X are advised to use `coin.cls` as early as possible in the creation of their files.

### **1. THE COIN DOCUMENT CLASS**

The use of L<sup>A</sup>T<sub>E</sub>X document classes allows a simple change of class to transform the appearance of your document. The `coin` class file preserves the standard L<sup>A</sup>T<sub>E</sub>X interface such that any document that can be produced using the standard L<sup>A</sup>T<sub>E</sub>X `article` class can also be produced with the `coin` class file.

It is likely that the make-up will change after file submission. For this reason, we ask you to ignore details such as slightly long lines, page stretching, or figures falling out of synchronization, because these details can be dealt with at a later stage.

Use should be made of symbolic references (`\ref`) in order to protect against late changes of order, etc.

All papers submitted to *Computational Intelligence* should be prepared using the `referee` option in the `documentclass` command, as discussed in Section 2. This option produces a version of the manuscript suitable for review by editors and referees. Submitted manuscripts prepared without invoking the `referee` option will be returned to the authors for reformatting.

### **2. USING THE COIN CLASS FILE**

If the file `coin.cls` is not already in the appropriate system directory for L<sup>A</sup>T<sub>E</sub>X files, either arrange for it to be put there or copy it to your working directory. The `coin` document class is implemented as a complete class, *not* a document style option. In order to use the Computational Intelligence document class, replace `article` by `coin` in the `\documentclass` command at the beginning of your document:

```
\documentclass{article}
```

is replaced by

```
\documentclass{coin}
```

In general, the following standard document style options should *not* be used with the `coin` class file:

- (1) 10pt, 11pt, 12pt – unavailable;
- (2) `twoside` (no associated style file) – `twoside` is the default;
- (3) `fleqn`, `leqno`, `titlepage` – should not be used (`fleqn` is already incorporated into the Computational Intelligence style);

The `coin` class file has been designed to operate with the standard version of `lfonts.tex` that is distributed as part of L<sup>A</sup>T<sub>E</sub>X. If you have access to the source file for this guide, `coinguide.tex`, and to the specimen article, `coinsample.tex`, attempt to typeset both of these. If you find font problems you might investigate whether a non-standard version of `lfonts.tex` has been installed in your system.

Authors using L<sup>A</sup>T<sub>E</sub>X wishing to create PDF files with smooth fonts are advised to read Adobe FaxYI Document Number 131303 by Kendall Whitehouse. Type 1 PostScript versions of the Computer Modern fonts are now freely available and are normally installed with new T<sub>E</sub>X/L<sup>A</sup>T<sub>E</sub>X software.

## 2.1. Additional Document Style Options

The following additional style options are available with the `coin` class file:

- `doublespacing` – this will double-space your article by setting `\baselinestretch` to 2.
- `referee` – this enables the production of a version of the manuscript suitable for review by editors and referees.
- `galley` – no running heads, no attempt to align the bottom of columns.
- `useAMS` – this enables the production of upright Greek characters  $\pi$ ,  $\mu$  and  $\partial$ .
- `usedcolumn` – this uses the package file `dcolumn.sty` to define two new types of column alignment for use in tables.
- `usenatbib` – this uses Patrick Daly’s `natbib.sty` package for cross-referencing.
- `usegraphicx` – this enables the use of the `graphicx` package for inclusion of figures. Note that the standard L<sup>A</sup>T<sub>E</sub>X graphics package `graphicx.sty` is required in order to use the `usegraphicx` option.

Please place any additional command definitions at the very start of the L<sup>A</sup>T<sub>E</sub>X file, before the `\begin{document}`. For example, user-defined `\def` and `\newcommand` commands that define macros for technical expressions should be placed here. Other author-defined macros should be kept to a minimum. Note that boldface, lowercase greek symbols may be obtained automatically; see Section 4.5.3. Please do not customize the Computational Intelligence macros or class file, or redefine macros that are already in the class file, and please do not include additional definitions unless they are actually used in the paper.

## 2.2. Landscaping Pages

If a table is too wide to fit the standard measure, it may be turned, with its caption, 90 degrees. Landscape tables cannot be produced directly using the `coin` class file because T<sub>E</sub>X itself cannot turn the page, and not all device drivers provide such a facility. The following procedure can be used to produce such pages.

- (1) Use the package `rotating` in your document and change the coding from
 

```
\begin{table}... \end{table}
```

 to
 

```
\begin{sidewaystable}... \end{sidewaystable}
```

 environments in your document to turn your table on the appropriate page of your

document. For instance, the following code prints a page with the running head, a message half way down and the table number towards the bottom.

```
\begin{sidewaystable}
  \caption{Landscape table to go here.}
  \label{landtab}
\end{sidewaystable}
```

### 3. ADDITIONAL FACILITIES

In addition to all the standard L<sup>A</sup>T<sub>E</sub>X design elements, the coin class file includes the following features.

- (1) Extended commands for specifying a short version of the title for the running headline.
- (2) Use of the `description` environment for unnumbered lists.

In general, once you have used the additional `coin.cls` facilities in your document, do not process it with a standard L<sup>A</sup>T<sub>E</sub>X class file.

#### 3.1. Titles and Author's Name

The title of the article and the author's name (or authors' names) are used at the beginning of the article for the main title.

#### 3.2. Running Headline

The title is used as running headlines at the top of every odd-numbered page. **For the title running head, use a** shortened title, e.g., THIS IS AN EXAMPLE OF RECTO RUNNING HEAD. For even-numbered page or verso page running head should be followed e.g., "COMPUTATIONAL INTELLIGENCE".

The `\pagestyle` and `\thispagestyle` commands should not be used. Similarly, the commands `\markright` and `\markboth` should not be necessary.

Although the main heading can run to several lines of text, the running headline must be a single line. Moreover, new line commands (e.g. `\\`) are not acceptable in a running headline. To enable you to specify an alternative short running head, the standard `\title` commands has been extended to take an optional argument to be used as the running headline. The running headlines can be produced using the following code:

```
\title[This is an Example of Chapter Title]
      {This is an Example of Chapter Title}
```

The `\author` coding for two or more authors from the same institution is as follows:

```
\author{{\sc Yiming Ye}\\
        {\it IBM T.J. Watson Research Center, Yorktown Heights, New York}}
```

for two authors from different institutions, the coding will be:

```
\author{{\sc Yiming Ye}\\
        {\it IBM T.J. Watson Research Center, Yorktown Heights, New York}}\\
\and
        {\sc John K. Tsotsos}\\
        {\it Department of Computer Science, York University,
Toronto, Ontario, Canada M3J 1P3}}
```

The `\thanks` note produces a footnote to the title or author. The footnote can be repeated using the `\footnotemark[]` command.

```
\author{{\sc Yiming Ye}\\
        {\it IBM T.J. Watson Research Center, Yorktown Heights, New York}\\
\and
        {\sc John K. Tsotsos}\\
        {\it Department of Computer Science, York University,
Toronto, Ontario, Canada M3J 1P3}
\thanks{Address correspondence to Yiming Ye and John K. Tsotsos, IBM T.J. Watson
Research Center, P.O. Box 704, Yorktown Heights, NY 10598, USA.}
}
```

### 3.3. Abstracts and Key words

At the beginning of your article, the title should be generated in the usual way using the `\maketitle` command. The abstract should be enclosed within an abstract environment, followed immediately by the key words enclosed in a keywords environment. For example, the titles for this guide were produced by the following source:

```
\begin{abstract}
The world will little note, nor long remember, what we say here, but
can never forget what they did here. It is for us, the living, rather
to be dedicated here to the unfinished work which they have, thus far,
so nobly carried out.
\end{abstract}
\begin{keywords}
Colostrum, Milk, Milk oligosaccharide, Non-human mammal.
\end{keywords}

\maketitle

\section{Introduction}
```

The heading ‘KEY WORDS:’ is included automatically.

## 4. SOME GUIDELINES FOR USING STANDARD FACILITIES

The following notes may help you achieve the best effects with the `coin` class file.

### 4.1. Sections

L<sup>A</sup>T<sub>E</sub>X 2<sub>ε</sub> provides four levels of section headings and they are all defined in the `coin` class file:

```
\section
\subsection
\subsubsection
\paragraph
```

Section numbers are given for section, subsection, subsubsection and paragraph headings. Section heading is automatically converted to cap style; if you need any other style, see the example in Appendix section.

#### 4.2. Lists

The coin class file provides unnumbered lists using the `description` environment for example,

First unnumbered item which has no label and is indented from the left margin which has no label and is indented from the left margin.

Second unnumbered item.

Third unnumbered item which has no label and is indented from the left margin.

was produced by:

```
\begin{description}
  \item First unnumbered item...
  \item Second unnumbered item.
  \item Third unnumbered item which has no label and is indented from
the left margin.
\end{description}
```

The coin class file also provides bullet/itemize lists using the `itemize` environment for example,

- First unnumbered item which has no label and is indented from the left margin which has no label.
- Second unnumbered item.
- Third unnumbered item which has no label and is indented from the left margin.

was produced by:

```
\begin{itemize}
  \item First unnumbered item which has no label and is indented
from the left margin which has no label.
  \item Second unnumbered item.
  \item Third unnumbered item which has no label and is indented
from the left margin.
\end{itemize}
```

Numbered lists is also provided in coin class file using the `enumerate` environment for example,

- (1) The attenuated and diluted stellar radiation. The attenuated and diluted stellar radiation;
- (2) Scattered radiation, and
- (3) Reradiation from other grains.

was produced by:

```
\begin{enumerate}
  \item The attenuated and diluted stellar radiation.
The attenuated and diluted stellar radiation;
  \item Scattered radiation, and
  \item Reradiation from other grains.
\end{enumerate}
```

1. The attenuated and diluted stellar radiation;
2. Scattered radiation, and
3. Reradiation from other grains.

was produced by:

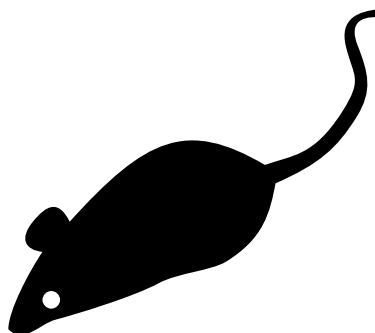


FIGURE 1. An example figure caption.

```
\begin{enumerate}
  \item[1.] The attenuated and diluted stellar radiation;
  \item[2.] Scattered radiation, and
  \item[3.] Reradiation from other grains.
\end{enumerate}
```

#### 4.3. Illustrations (or figures)

The coin class file will cope with most positioning of your illustrations and you should not normally use the optional positional qualifiers on the figure environment that would override these decisions. Figure captions should be *below* the figure itself, therefore the `\caption` command should appear after the figure or space left for an illustration. For example, Figure 1 is produced using the following commands:

```
\begin{figure}
\centerline{%
\includegraphics[width=50mm]{art/mouse.eps}}
  %% to include a figure, or to leave a blank space
\caption{An example figure caption.}
\label{sample-figure}
\end{figure}
```

Cross-referencing of figures, tables, and numbered, displayed equations using the `\label` and `\ref` commands is encouraged. For example, in referencing Figure 1 above, we used `For example, Figure~\ref{sample-figure} is produced using...`

#### 4.4. Tables

The coin class file will cope with most positioning of your tables and you should not normally use the optional positional qualifiers on the table environment which would override these decisions. Table captions should be at the top, therefore the `\caption` command should appear *above* the body of the table.

Commands to redefine quantities such as `\arraystretch` should be omitted in general. For example, Table 1 is produced using the following commands. Note that `\rmn` will produce a roman character in math mode. There are also `\bld` and `\itl`, which produce bold face and text italic in math mode.  $G$  is the slope of the Lorentz factor distribution, i.e.  $n(\gamma) \propto \gamma^G$ , extending between  $\gamma_1$  and  $\gamma_2$ , with mean value  $\langle \gamma \rangle$ ,  $f$  is the ratio between

the intrinsic jet luminosity and the extended, unbeamed luminosity, while  $\theta_c$  is the critical angle separating the beamed class from the parent population.

```
\begin{table}[b]
\caption{Radio-band beaming model parameters.}
\label{symbols}
{\begin{tabular*}{33pc}{@{}l@{\extracolsep{\fill}}c@{\extracolsep{\fill}}
c@{\extracolsep{\fill}}c@{\extracolsep{\fill}}
c@{\extracolsep{\fill}}c@{\extracolsep{\fill}}
c@{}}

\Hline
Class & $\gamma_1$ & $\gamma_2$
& $\langle \gamma \rangle$ & $G$ & $f$ & $\theta_c$ \\
\hline
BL Lacs & 5 & 36 & 7 & -4.0
& $1.0 \times 10^{-2}$ & $10^\circ$ \\
FSRQs & 5 & 40 & 11 & -2.3
& $0.5 \times 10^{-2}$ & $14^\circ$ \\
\hline
\end{tabular*}}
\bigskip
\end{table}
```

As with figures, cross-referencing of tables is encouraged. For example, we would reference Table 1 using `Table~\ref{symbols}`.

#### 4.5. Typesetting Mathematics

**4.5.1. Displayed mathematics.** The `coin` class file will set displayed mathematics with center to the column width, provided that you use the L<sup>A</sup>T<sub>E</sub>X 2<sub>ε</sub> standard of open and closed square brackets as delimiters.

The equation

$$\sum_{i=1}^p \lambda_i = \text{trace}(\mathbf{S})$$

was typeset using the `coin` class file with the commands

```
\[
\sum_{i=1}^p \lambda_i = \rmn{trace} (\mathbf{S})
\]
```

Displayed equations should not be numbered unless they are referenced in the text. For such equations, cross-referencing is encouraged. For example,

```
\begin{equation}
```

TABLE 1. Radio-band beaming model parameters.

Class	$\gamma_1$	$\gamma_2$	$\langle \gamma \rangle$	$G$	$f$	$\theta_c$
BL Lacs	5	36	7	-4.0	$1.0 \times 10^{-2}$	$10^\circ$
FSRQs	5	40	11	-2.3	$0.5 \times 10^{-2}$	$14^\circ$

```
(n-1)^{-1} \sum_{i=1}^n (X_i - \overline{X})^2.
\label{eq:samplevar}
\end{equation}
```

Equation~(\ref{eq:samplevar}) gives the formula for sample variance.

4.5.2. *Bold math italic / bold symbols.* To get bold math italic you should use `\bmath`, e.g.

```
\[
d(\bmath{s_{t_u}}) = \langle [RM(\bmath{X_y}
+ \bmath{s_t}) - RM(\bmath{x_y})]^2 \rangle
\]
```

to produce:

$$d(\mathbf{s}_{t_u}) = \langle [RM(\mathbf{X}_y + \mathbf{s}_t) - RM(\mathbf{x}_y)]^2 \rangle$$

Working this way, scriptstyle and scriptscriptstyle sizes will take care of themselves.

4.5.3. *Bold greek.* Upper and lowercase Greek characters are available in all typesizes.

You can then use these definitions in math mode, as you would normal Greek characters:

```
\[
\bmath{\alpha_{\mu}} = \bmath{\Theta} \alpha.
\]
```

will produce

$$\alpha_{\mu} = \Theta \alpha.$$

4.5.4. *Upright greek characters.* You can obtain upright Greek characters if you have access to the American Maths Society Euler fonts (version 2.0), but you may not have these. In this case, you will have to use the normal math italic symbols and the typesetter will substitute the corresponding upright characters. You will make this easier if you can use the macros `\upi`, `\umu` and `\upartial` etc. in your text to indicate the need for upright characters, together with the `useAMS` global option: (`\documentclass[useAMS]{coin}`). Characters  $\pi$ ,  $\mu$  and  $\partial$  will appear upright only on systems that have the Euler roman fonts (`eurmxx`); characters  $\leq$  and  $\geq$  appear slanted only on systems that have the AMS series A fonts (`msamxx`). On systems that do not have these fonts, the standard forms of the characters appear in the printout; however, they should be correct in the final typeset paper if the correct L<sup>A</sup>T<sub>E</sub>X commands have been used.

#### 4.6. Acknowledgments and Supplementary Material

Immediately following the end of the main body of the paper, the `\backmatter` command should be issued. This will ensure that subsequent formatting of section headings is consistent with the style in *Computational Intelligence* articles. Two optional sections may be placed following this command, preceding the bibliography (discussed in the next section).

An optional Acknowledgments section may be included. Authors may wish to thank or acknowledge the contributions of specific individuals who are not named as authors on the paper, or they may wish to cite a grant that supported the research being reported in the article.

The following gives an example of how these elements should be included:

```
\backmatter
```

```
\section*{ACKNOWLEDGMENTS}
```

The authors wish to thank...

```
\section*{SUPPLEMENTARY MATERIAL}
```

Web Appendix 1 referenced in Section~\ref{ss:example} is available under the Paper Information link at the Computational Intelligence website.

#### 4.7. References

References to published literature should be quoted in the text by author and date, e.g., Draine (1978) or (Begelman, Blandford, and Rees, 1984). Where more than one reference is cited having the same author(s) and date, the letters a,b,c,... should follow the data, e.g., Smith (1988a), Smith (1988b), etc. For papers with exactly three authors, the first time the paper is cited, all author names should be used, e.g., Begelman, Blandford, and Rees (1984), and subsequent citations should use “et al.,” e.g., Begelman et al. (1984). For papers with more than three authors, the first author name plus “et al.” should always be used. In the bibliography list, all authors should be retained.

```
\begin{thebibliography}{}
\bibitem[\protect\citeauthoryear{Andrews and Hogan}{Andrews and
  Hogan}{1983}]{andrews1983}
{\sc Andrews, J.~R.}, and {\sc N.~Hogan}. 1983.
\newblock Impedance control as a framework for implementing obstacle
  avoidance in a manipulator.
\newblock {\em In\/}~Control of Manufacturing Processes and Robotic Systems,
  pp.\ 243--251.

\bibitem[\protect\citeauthoryear{Blumberg, Downie, Ivanov, Berlin, Johnson,
  and Tomlinson}{Blumberg et~al.}{2002}]{blumberg2002ili}
{\sc Blumberg, B.}, {\sc M.~Downie}, {\sc Y.~Ivanov}, {\sc M.~Berlin}, {\sc
  M.P. Johnson}, and {\sc B.~Tomlinson}. 2002.
\newblock Integrated learning for interactive synthetic characters.
\newblock {\em In\/}~Proceedings of the 29th Annual Conference on Computer
  Graphics and Interactive Techniques, pp.\ 417--426.

\bibitem[\protect\citeauthoryear{Blumberg and Galyean}{Blumberg and
  Galyean}{1995}]{blumberg1995mld}
{\sc Blumberg, B.M.}, and {\sc T.A. Galyean}. 1995.
\newblock Multi-level direction of autonomous creatures for real-time
  virtual environments.
\newblock Proceedings of SIGGRAPH,~{\bf 95}:47--54.

\bibitem[\protect\citeauthoryear{Breiman}{Breiman}{1996}]{breiman1996bp}
{\sc Breiman, L.} 1996.
\newblock Bagging predictors.
\newblock Machine Learning,~{\bf 24\/}(2):123--140.
\end{thebibliography}
```

## REFERENCES

- ANDREWS, J. R., and N. HOGAN. 1983. Impedance control as a framework for implementing obstacle avoidance in a manipulator. *In* Control of Manufacturing Processes and Robotic Systems, pp. 243–251.
- BLUMBERG, B., M. DOWNIE, Y. IVANOV, M. BERLIN, M.P. JOHNSON, and B. TOMLINSON. 2002. Integrated learning for interactive synthetic characters. *In* Proceedings of the 29th Annual Conference on Computer Graphics and Interactive Techniques, pp. 417–426.
- BLUMBERG, B.M., and T.A. GALYEAN. 1995. Multi-level direction of autonomous creatures for real-time virtual environments. *Proceedings of SIGGRAPH*, **95**:47–54.
- BREIMAN, L. 1996. Bagging predictors. *Machine Learning*, **24**(2):123–140.

If the `usenatbib` global option is specified, Patrick Daly’s `natbib.sty` package will be used for cross-referencing. If the `usenatbib` option is specified, citations in the text should be in one of the following forms (or one of the additional forms documented within `natbib.sty` itself).

- `\citet{key}` produces text citations, e.g., Jones et al. (1990),
- `\citep{key}` produces citations in parentheses, e.g., (Jones et al., 1990)

For three-author papers, a full author list can be forced by putting a `*` just before the `{`. To add notes within the citation, use the form `\citep[pre_reference_text][post_reference_text]{key}` (note that either of *pre\_reference\_text* and *post\_reference\_text* can be blank).

Items in the reference list must be of the form  
`\bibitem[\protect\citeauthoryear{author_names}{year}]{key}`  
 Text of reference ...

for one-, two- and multi-author papers, or  
`\bibitem[\protect\citeauthoryear{three_author_names}{first_author_et al}{year}]{key}`  
 Text of reference ..., for three-author papers.

Note that Patrick Daly’s package `natbib.sty` is required in order to use the `usenatbib` option.

We recommend that authors use `natbib.sty` as their standard cross-referencing package, because of the flexibility in citation style that it provides.

Each entry takes the form

```
\bibitem[\protect\citeauthoryear{Author(s)}{Date}]{tag}
  Bibliography entry
```

where `Author(s)` should be the author names as they are cited in the text, `Date` is the date to be cited in the text, and `tag` is the tag that is to be used as an argument for the various `\cite` commands. `Bibliography entry` should be the material that is to appear in the bibliography, suitably formatted. Please, wherever possible, supply the formatted `.bbl` file of your reference list rather than the ‘raw’ `.bib` file(s).

## 5. APPENDICES

The appendices in this guide were generated by typing:

```
\appendix
\section{}
\subsection{For Authors}
:
\section{}
\subsection{For Editors}
```

Thereafter, every `\section` command will generate a new appendix.

## 6. EXAMPLE OF SECTION HEADING WITH lowercase, *ITALIC*, AND BOLD GREEK SUCH AS $\mu^\kappa$

There are at least two ways of achieving this section head. The first involves the use of `\boldmath`. You could say:

```
\section[] {Example of Section Heading with \lowercase{lowercase},
           \textbfit{Italic}, and Bold Greek such as $ \bmu^{\bkappa} $} \label{headings}
```

Many implementations of L<sup>A</sup>T<sub>E</sub>X do not support `\boldmath` at 9pt, so you may need to use the bold Greek characters as described in Section 4.5.3, and typeset the section head as follows:

```
\section[] {Example of Section Heading with \lowercase{lowercase},
           \textbfit{Italic}, and Bold Greek such as $ \bmu^{\bkappa} $} \label{headings}
```

## APPENDIX

For Authors

Table 2 is a list of design macros which are unique to the Computational Intelligence class and style files. The list displays each macro's name and description.

## APPENDIX

For Editors

The additional features shown in Table 3 may be used for production purposes. The most commonly used of these is `\bsp`, which produces the 'This paper ...' statement. This should be placed at the end of the document.

## APPENDIX

Troubleshooting

Authors may from time to time encounter problems with the preparation of their papers in T<sub>E</sub>X/L<sup>A</sup>T<sub>E</sub>X. The appropriate action to take will depend on the nature of the problem – the following is intended to act as a guide.

- (1) If you choose to use `\boldmath`, you may find that `boldmath` has not been defined locally for use with a particular size of font. If this is the case, you will get a message that reads something like:

```
LaTeX Warning: No \boldmath typeface in this size,
using \unboldmath on input line 44.
```

If you get this message, you are advised to use the alternative described in this guide for attaining bold face math italic characters, i.e. `\bm{...}`.

- (2) Normal uppercase calligraphic can be produced with `\mathcal` as normal (in math mode). Bold calligraphic can be produced with `\bm{math}`. e.g. `$\bm{math}{\mathcal A}$` gives ***A***.
- (3) Automatic scaling of brackets. The codes `\left` and `\right` should be used to scale brackets automatically to fit the equation being set. For example, to get

$$v = x \left( \frac{N + 2}{N} \right)$$

TABLE 2. Authors' notes.

<code>\title[optional short title]{long title}</code>	short title used in running head
<code>\author[optional short author(s)]{long author(s)}</code>	short author(s) used in running head
<code>\newauthor</code>	starts a new line in the author environment
<code>\begin{abstract}...\end{abstract}</code>	for abstract on titlepage
<code>\begin{keywords}...\end{keywords}</code>	for keywords on titlepage
<code>\nokeywords</code>	if there are no keywords on titlepage
<code>\begin{figure*}...\end{figure*}</code>	for a double spanning figure in two-column mode
<code>\begin{table*}...\end{table*}</code>	for a double spanning table in two-column mode
<code>\plate{Opposite p.~812, MNRAS, {\bf 261}}</code>	used with <code>\thispagestyle{plate}</code> for plate pages
<code>\contcaption{}</code>	for continuation figure and table captions
<code>\bmath{math text}</code>	Bold math italic / symbols.
<code>\textbfit{text}, \mathbfit{text}</code>	Bold text italic (defined in the preamble of <code>mnsample.tex</code> ).
<code>\textbfss{text}, \mathbfss{text}</code>	Bold text sans serif (defined in the preamble of <code>mnsample.tex</code> ).

TABLE 3. Editors' notes.

<code>\pagerange{000--000}</code>	for catchline, note use of <code>en-rule</code>
<code>\pagerange{L00--L00}</code>	for letters option, used in catchline
<code>\volume{000}</code>	volume number, for catchline
<code>\pubyear{0000}</code>	publication year, for catchline
<code>\journal</code>	replace the whole catchline at one go
<code>[doublespacing]</code>	<code>documentstyle</code> option for doublespacing
<code>[galley]</code>	<code>documentstyle</code> option for running to galley
<code>[landscape]</code>	<code>documentstyle</code> option for landscape illustrations
<code>[letters]</code>	<code>documentstyle</code> option, for short communications (adds L to folios)
<code>[onecolumn]</code>	<code>documentstyle</code> option for one-column
<code>[referee]</code>	<code>documentstyle</code> option for 12/20pt, single col, 39pc measure
<code>\bsp</code>	typesets the final phrase 'This paper has been typeset from a T <sub>E</sub> X/L <sup>A</sup> T <sub>E</sub> X file prepared by the author.'

use the code

```
\[
  v = x \left( \frac{N+2}{N} \right)
\]
```

- (4) Roman font in equations. It is often necessary to make some symbols roman in an equation (e.g. units, subscripts). For example, to get the following output:

$$\sigma \simeq (r/13 \, h^{-1} \, \text{Mpc})^{-0.9}, \quad \omega = \frac{N - N_s}{N_R},$$

you should use:

```
\[
  \sigma \simeq (r/13~h^{-1}~\rmn{Mpc})^{-0.9},
  \quad \omega = \frac{N - N_{\rmn{s}}}{N_{\rmn{R}}},
\]
```